PEACE/WILLISTON
FISH & WILDLIFE
COMPENSATION
PROGRAM

BC hydro

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Wildlife Program
Annual Report 1991/92

M. D. Wood
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The Peace/Williston Fish & Wildlife Compensation Program is a cooperative venture of BC Hydro and the provincial fish and wildlife management agencies, supported by funding from BC Hydro. The Program was established to enhance and protect fish and wildlife resources affected by the construction of the W.A.C. Bennett and Peace Canyon dams on the Peace River, and the subsequent creation of the Williston and Dinosaur Reservoirs.

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This report has been approved by the Peace/Williston Fish and Wildlife Compensation Program Fish Technical Committee.

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INTRODUCTION

The 91/92 fiscal year was the second full year of work on the Williston Wildlife Compensation Program. Enhancement projects included prescribed burning and mechanical forage enhancement, wetlands enhancement, land acquisition, Stone's sheep transplant monitoring, and the initiation of a cavity nester habitat enhancement project. Habitat selection studies of elk, Stone's sheep and caribou continued on the Peace Arm, and were initiated for woodland caribou in the Omineca. Assessments of available habitats were carried out in conjunction with the wetlands and forage enhancement programs, and through three habitat mapping projects in various stages of completion. The public consultation process was carried out through spring workshops, local meetings, press releases and the publication of the "Natureline". Planning documents were produced to guide future work, and all work completed since the inception of the Wildlife Program was summarized.

The Wildlife Compensation Program worked co-operatively with a number of different groups this year who's input in the form of manpower and/or monies allowed for the expansion of some projects over and above that possible with the available Compensation Program resources. Ducks Unlimited built nest boxes and geese nesting islands that were purchased for our waterfowl enhancement program, and provided expertise during surveys to assess waterfowl habitat throughout the Parsnip region. Co-operation between Williston Wildlife and the Ministry of Forests in Mackenzie was ongoing throughout the spring burning season in the Finlay area with some additional funding for the burns provided by the Foundation for North American Wild Sheep. In addition, a Ministry of Forests wildlife specialist assisted in the capturing and radio-collaring of the woodland caribou in the Omineca, and provided additional radio-collars. The Ministry of Environment in Victoria provided a pedologist to assist with our habitat mapping programs. The pedologist gathered field data and co-ordinated all persons involved in the field and mapping portions of the projects. Fletcher Challenge in Crofton provided funding for the habitat mapping projects, and G.I.S. mapping of the field data. Fletcher Challenge in Mackenzie also worked co-operatively on the cavity nester habitat enhancement project with us. Fletcher and Williston determined areas suitable for the initiation of such a project, and Fletcher logged three blocks according to our specifications. They provided P.H.S.P.'s and other cruise data, accommodations during field work, and much of their time. Negotiations for the purchase of a piece of prime wildlife habitat on the Peace Arm were carried out by the Nature Trust of B.C. for the Compensation Program. Investigation of possible involvement with other groups continued on an ongoing basis throughout the year.

During the year, the Wildlife Program employed two full-time biologists out of Prince George: one was employed from April to mid-January, the other from May to the end of the fiscal year. The initiation period for the new employee hired in May, and the lack of a second biologist during the latter part of the fiscal year resulted in several project delays and a poor spring 92 burning season, and contributed to the underexpenditure in the Wildlife budget. A number of individuals/companies were contracted to work on specific projects, and a university co-op student was hired for the 4 month summer period.

PROGRAM MANAGEMENT

A. STAFFING

* Man Wood was hired on full time as a wildlife biologist May 21/91 in Prince George, to assist Rick Dawson with Compensation Program activities. Mari replaced Peter Davidson from Fort St. John who left the program Dec 90.
* Fraser Corbould was hired May 15/91 through the S.F.U. co-op student program. Fraser worked mainly on the wetland enhancement program and assisted biologists with other projects. Fraser's term concluded August 31/91.
* Rick Dawson left the Compensation Program January 17/92 to join the Ministry of Forests in Williams Lake.
* The procedures necessary for the hiring of a replacement biologist, and a 1992 summer co-op student were initiated.

B. CONTRACTORS

* Carrier-Sikani Tribal Council: On direction from Ministry of Environment management, the Carrier-Sikani Tribal Council was contracted as a General Contractor for part of the Peace Habitat Mapping project. The Carrier-Sikani administered the professional services contracts for the wildlife biologist and vegetation ecologist required for this project.
* Ken Kyllo: Ken was contracted as part of the mop-up crews for the prescribed burns carried out in the spring in the Finlay watershed (Akie River).
* Ingenika Band: The Ingenika Band also supplied mop-up services on the Akie and Bevel burns in the Finlay area.
* Rod Backmeyer: Rod was contracted for another year to continue the relocations of Stone's sheep, elk and caribou on the north and south sides of the Peace arm. Flights were conducted twice a month to locate the animals. A contract to collect fecal samples from deer, Stone's sheep and elk from the north Peace Arm was also offered to Rod and completed over the winter.
* Linda Murray: Linda was contracted to prepare a draft working plan for the monitoring of our Cavity Nester Enhancement Program. The plan included monitoring of snag decay, breeding birds, furbearers and vegetation growth.
* Drew Martin: The Pack River mechanical forage enhancement contract solicited a fair number of interested contractors; Drew received the contract and started up work in the fall.
* Lois Gray: Lois was contracted to assist with preparations for the spring public workshops. Visual displays, a wildlife slide show and script, and a wildlife program information handout were prepared.

C. PROGRAM PLANNING

Budget forecasts and revisions were prepared on an ongoing basis throughout the year. Some projects were dropped from the Program earlier in the year due to unexpected budget increases in other projects. Savings were recognized at the end of the year, resulting from the delayed completion of certain contracts, and the lack of staff resources to fully carry out the Wildlife Program. A five-year project plan was developed for the Wildlife Program, and approved by the Technical Committee. In addition, a "Progress-to-Date" spreadsheet was developed, outlining all of the projects initiated since the inception of the Williston Compensation Program. Proposals were developed to solicit funding from the Habitat Conservation Fund for the Cavity Nester Habitat Enhancement Project and the Omineca River Forage Enhancement Project.

D. OTHER

The Williston Compensation Program (both Fish and Wildlife sections) moved into new office space in December. The space is on the 3rd floor of the government building, with the Ministry of Environment, Lands and Parks. The Williston area houses two permanent offices, four offices with partition walls, a mapping area, a conference room and an equipment storage room. We are serviced with six phones, five computers and a laser printer. Rent for the space is paid to the Ministry of Environment.

PUBLIC CONSULTATION

Throughout the year, public input was gathered and incorporated into the planning of Wildlife Compensation Program activities. Public interests, concerns and suggested projects are all considered during the planning process. A valuable source of knowledge, local people also provided background information needed for many of our projects. A large commitment of program staff time was also necessary to keep the public informed of Wildlife Compensation Program activities.

A. WORKSHOPS

Formal public consultation efforts included day long public workshops in Mackenzie and Hudson's Hope. Stakeholders representing a wide variety of interest groups were invited. The Steering Committee addressed issues relevant to the fund and organization of the Compensation Program, which was followed by overviews of both the wildlife and fisheries programs presented by the Program biologists. Participants were then allowed time to make their own five minute presentations to the group. The workshops concluded with a panel consisting of Steering and Technical Committee's and Program Biologists addressing these concerns and other issues raised during the day. Questionnaires were also prepared and filled out. A report on the workshops is being prepared by Greg Becker from B.C. Hydro, which will assist us in future program planning.

B. MEETINGS

Less formal contacts were made through meetings with groups or individuals, in the field and in the office. These included the Treaty 8 Tribal Council, Ingenika Band, Ducks Unlimited, Ministry of Forests, Ministry of Environment, Fletcher Challenge Canada Ltd., Guide-Outfitters, Mackenzie-McLeod Lake Trappers Assn, Rocky Mountain Elk Foundation, Nature Trust, Omineca Local Resource Use Plan meetings and B.C. Parks.

C. PRESS RELEASES

News articles were written and released on the prescribed burning program, the installation of geese nesting islands in the Mackenzie area, the monitoring by radio-telemetry of the Peace Arm elk and Stone's sheep, and the cavity nester habitat enhancement project. We also invited the media to accompany us during our caribou capturing venture. CKPG-TV filmed the capture events, and produced an eight minute video that was aired locally and on CBC-TV Vancouver. Forty-five minutes of raw footage was also obtained. Also with us was a reporter from the local Citizen newspaper who produced a full page news article on the caribou project.

D. NATURELINE

Written responses to major issues raised during the public consultation workshops in the spring of 91 were prepared for publication in the Natureline. Feature articles were written on the wetlands and Stone's sheep projects, as was an overview of all projects in the Wildlife Program. (The Fisheries section was given an equivalent amount of space in the newsletter.) "Letters to the Editor" and "New Staff Members" sections were also included. The six page Natureline was released in February 1992.

E. OTHER

On November 19, 1991, the Dunlevy Property Land Dedication was held just north of Hudson's Hope. The Dunlevy property was purchased by the Nature Trust in 1988 with Compensation funds. The title to the property is held in Nature Trust's name, with a 99 year lease to the Ministry of Environment for management purposes. A sign explaining the purchase of this prime piece of wildlife habitat was erected on the corner of the property. (It was snowing at the time, and elk could be seen in the background.) B.C. Hydro and Ministry of Environment personnel attended, as did the Mayor of Hudson's Hope.

ENHANCEMENT. PROTECTION AND INTEGRATED MANAGEMENT PROJECTS

1. PRESCRIBED BURNING - PEACE

Plans were initiated in the fall, for spring 92 burning of the Branham slide and Butler Ridge areas on the North side of the Peace Arm. Due to the lack of adequate program staffing from January on, time spent on detailed planning for the Peace burns was reduced, and only a small burn on the Branham area was attempted by the Dawson Creek Forest District (in 92/93 fiscal year).

2. PRESCRIBED BURNING - FINLAY

A very successful burning program was completed in the Finlay drainage in the spring of 91. Two areas on the Akie River, and one at Bevel Creek totalling 1900 hectares were burned to enhance winter and spring range forage for moose and elk. These burns were located in the low snow areas identified by last years snow depth mapping and were strongly supported by Ken Kyllo, the local guide-outfitter, and by the Ingenika Indian Band. Local mop-up crews were supplied by Ken Kyllo and the Ingenika Band. Some additional funding was provided by the Foundation for North American Wild Sheep.

3. PRESCRIBED BURN MONITORING

First year vegetation monitoring was carried out on the Bevel Creek Burn site. The objectives of the burn were to reduce canopy closure, and rejuvenate over-mature forage species. The Bevel burn was found to be very successful. The overstory was killed in numerous patches amounting to about 10% of the area within the burn perimeter, and overstory vigour was reduced in much of the total burn area. Overstory mortality will eventually exceed the 10% observed within the next few years after blowdown. In areas where the overstory trees (aspen, birch) were killed or vigour reduced, basal suckering was prolific. All of the target understory species responded with abundant and vigorous sprouting of young shoots, with the first seasons's growth measured from 100 to 150 cm.

4. MECHANICAL FORAGE ENHANCEMENT - PARSNIP

Field work for a five-year forage enhancement plan for the Parsnip area was initiated during the summer and fall. Potential sites were surveyed throughout the Parsnip area, and interviews with local interest groups were conducted. Data was compiled from the summer's surveys, and sites were identified for immediate enhancement. Six hectares of overmature willow were cut by the Community Forest 91 program (co-op program between Fletcher Challenge and BC Forest Service) in areas designated by us along the Misinchinka River. A mechanical forage enhancement contract was awarded to a local Mackenzie contractor to cut 15 hectares of willow and alder along the Pack River. Cutting commenced in the fall, but was terminated due to heavy snow conditions, with only 2.5 hectares thinned. [Remaining area was cut in the spring, 92/93

fiscal year.) Planning was initiated for forage enhancement along the Omineca River slated to begin in the summer of 92. Helicopter surveys were flown in the upper Parsnip watershed, Nation River, Omineca River and Ingenika Rivers to determine approximate moose densities, and confirm some forage enhancement sites (both mechanical and burning).

5. CAVITY NESTER HABITAT ENHANCEMENT PROJECT

A pilot project to develop, test and monitor alternate forest harvesting techniques that maintain and/or create snag habitat for cavity nesting birds and animals has begun. Two blocks were logged in the fall of 91 with the third block in January 92: all three were located in the Engelmann Spruce Subalpine Fir Zone. [The third block logged was not one that was agreed upon for this project. The winter logging left a mess of debris, which for ease of site preparation, will be burned. An agreement was made with Fletcher Challenge to have our "original" third block logged in the summer of 92 and site preparation on all three blocks will occur at this time.] The final draft of the working plan for the monitoring of the blocks was completed. Breeding bird surveys and vegetation monitoring will be postponed to 93 due to the late site preparation plans, while snag assessments, flagging and furbearer surveys will be carried out in 92. This is a cooperative project with Fletcher Challenge in Mackenzie, BC, and the B.C. Habitat Conservation Fund.

6. WETLANDS ENHANCEMENT

Inventories of waterfowl and wetland habitat were carried out throughout the summer in the Tutu and Mugaha areas near Mackenzie. The areas were also assessed for aquatic furbearer enhancement potential. Four geese nesting islands of a variety of styles were installed in the Tutu and Mugaha areas. In Tutu Bay, where water levels can fluctuate up to 10 metres, a wooden island on a counterweight pulley system was installed. Water fluctuations are much lower in the Mugaha marshes, where a wooden island with two cement weights was installed. Both the wooden islands were covered in dirt and seeded with grass. Two plastic PVC islands with weights were installed in adjacent areas, and loaded with cattails which must be replaced each year. Monitoring of the islands will take place in the summer of 92. A report on the habitat enhancement potential in the Mackenzie area was completed by our co-op summer student, and circulated to local stakeholders for comments. Inventories of potential wetland projects in the Parsnip area (and near Hudson's Hope) were conducted in cooperation with Ducks Unlimited.

7. AQUATIC FURBEARER ENHANCEMENT

Preliminary assessments of areas for potential aquatic furbearer habitat enhancement projects were carried out. The areas were suggested by the Mackenzie/McLeod Lake Trappers Association. No suitable areas were identified for enhancement this year. Continued meetings with the trappers and assessment of sites will be ongoing.

8. DUNLEVY WILDLIFE VIEWING

Over the winter, various options were reviewed on the types of involvement we could have with the wildlife viewing area at Dunlevy Creek north of Hudson's Hope. Future plans include forage enhancement by prescribed burning [see section 1 - Prescribed Burning - Peace] in the Butler Range area, and the drafting and construction of a sign on wildlife viewing in the area, including text, photos and diagrams on individual species ecology and types of enhancement. These projects will be initiated in the 92/93 and 93/94 fiscal years.

9. LAND ACQUISITION

Negotiations were initiated by the Nature Trust for the purchase of the "Adams" property (as identified in the Wildlife Compensation Programs' Land Acquisition Plan), a prime piece of ungulate winter range west of Adams Creek on the north side of the Peace Arm. The property came up for sale in the spring of 92, and with cost savings identified in the 91/92 budget, the Nature Trust was given approval to proceed with negotiations. [The land purchase went through in the 92/93 fiscal year.]

10. STONE'S SHEEP TRANSPLANT AND MONITORING - SOUTH PEACE ARM

Five radio-collared Stone's sheep from the 1990 and 1991 transplants to Mt. Monteith and Mt. Frank Roy on the south side of the Peace Arm were monitored by contract. In June, two of the collared rams were found drowned in the Moberly River, along with a third collarless ram from the 1990 transplant. In mid July, a replacement ram was captured, radio-collared and released in the transplant area. In February, the signal from a ewe from the 1990 transplant was found on mortality. Three Stone's sheep were being monitored by the end of year: two ewes from 1991, and the replacement ram. Summer habitat was found to be typically alpine, with winter finding the sheep in the alpine or on slightly lower elevation rock and timbered bluffs.

INVENTORY AND HABITAT RELATIONSHIPS

11. STONE'S SHEEP HABITAT SELECTION - NORTH PEACE ARM

Monitoring of four Stone's sheep on the north side of the Peace Arm continued twice monthly throughout the year (as with all the Peace ungulate relocations, see sections 10, 12 and 13). These sheep represent the source herd from which the sheep transplanted to Mt. Monteith and Mt. Frank Roy came from. Relocations showed similar seasonal habitat selection between the source and transplant herds. Preferred summer habitat was in the alpine areas with steep escape terrain, while sheep wintered on windswept alpine ridges, timbered bluffs and low elevation shrub/grassland (the latter is abundant in the range of the source herd).

12. ELK HABITAT SELECTION - NORTH PEACE ARM

Five cow elk captured and collared on the north side of the Peace Arm in March of 1991 were monitored throughout the year by contract. No significant movements were noted since capture although distinct changes in seasonal habitat selection were observed. During calving, elk were located mainly in dense aspen and mixedwood cover, while during the rut, the elk moved into higher elevation thick mixedwood or coniferous forests. Summer and winter found the elk on low elevation shrub/grassland open slopes.

13. CARIBOU HABITAT SELECTION - NORTH PEACE ARM

In September, the ungulate relocation project on the Peace Arm was expanded to include caribou which were previously collared in 1988 and 1989 by the Ministry of Environment in Fort St. John. Five animals were relocated and monitored throughout the remainder of the year. Habitat selection was found to be considerably different than from previous years data. From 1988 to 1990, caribou used alpine and subalpine forest habitats 80% of the time in winter. This past winters data indicates only 33% use of such forests, with 67% use of spruce and pine forests.

14. CARIBOU HABITAT SELECTION - WEST WILLISTON

Twenty woodland caribou were captured and radio-collared on the Wolverine and Butler Ranges on the west side of Williston Lake last year. An additional nine caribou were captured and collared in February and March of 1992, 4 on the Butlers and 5 on the Wolverines. [This years capture efforts were filmed by CKPG, our local T.V. station, and aired locally and in Vancouver. A local newspaper photographer also joined the expedition and released a full page news article.] A total of 21 caribou were being relocated at the end of the fiscal year. Natural causes claimed the lives of six caribou, one caribou's signal was never received (possibly a faulty collar), and one caribou was "missing". A bull from the original capture whose collar was malfunctioning, was sighted on the Wolverines, captured and re-collared this spring. Those caribou from the Butler Ranges were found to migrate up to 100 air kilometres to spring calving grounds. The Wolverine caribou migrated no more than 25 air kilometres. Habitat selection between the two winters changed dramaticaily. During the first caribou capturing venture, caribou were observed (and captured) in both the windswept alpine slope and lowland lodgepole pine flat habitats. Over the winter of 91/92, caribou were observed wintering only on the alpine ridges. This may have resulted from increased snow depths during the second winter forcing the animals out of timbered areas onto windswept alpine ridges. Relocation efforts were hampered during November, December and January due to poor weather conditions and equipment failure.

15. UNGULATE DIET ANALYSES

Previous collections of Stone's sheep, deer, elk and caribou were sent to the University of Washington Habitat Lab for analyses and results returned. Results will be reflected in progress reports for the different species projects detailed above. A contract was written for the collection of Stone's sheep, elk and deer pellets from the north Peace Arm over the winter. Additional caribou pellets were collected during caribou capture efforts on the west side of Williston Lake. All were sent to Washington for analysis.

16. WILDLIFE HABITAT MAPPING - OSPIKA

Mapping of the soils, vegetation and wildlife use in the Ospika drainage was carried out by Fletcher Challenge and Ministry of Environment habitat mapping specialists in Victoria using the G.I.S. system. Input was provided by Williston Wildlife staff on wildlife species ratings for each polygon. Mapping was delayed due to maternity leave of Fletcher staff member, but was resumed in the spring and maps completed.

17. WILDLIFE HABITAT MAPPING - PEACE

Mapping of the north Peace Arm began this year. The mapping project was contracted to the Carrier-Sikani Tribal Council who in turn sub-contracted a vegetation and a wildlife specialist. The soils specialist was provided by the Ministry of Environment in Victoria. Field work was carried out over the summer, and mapping of the data collected began in the fall. Mapping was not completed by the end of the fiscal year, with Carrier Sikani in default. [The Carrier-Sikani sub-contractors were contracted directly by Williston Wildlife in the summer of 92 to complete the mapping.]

18. WILDLIFE HABITAT MAPPING - OMINECA

Detailed planning was initiated for the mapping of the Omineca River area. Another co-operative mapping project with Fletcher Challenge, details such as area to be mapped, size of area, and monies involved for the Omineca project were determined. Field work will begin in the summer of 92.

1991/92 BUDGET EXPENDITURES

PROJECT NAME & ACCOUNT #	AMOUNT BUDGETED	AMOUNT EXPENDED	AMOUNT FORECASTED	TOTAL EXPENDITURE	BALANCE IN ACCOUNT
21290 - Project Management	$ 113,000	$ 63,506	$ 15,025	$ 78,531	$ 34,469
21293 - Prescribed Burning	$ 47,000	$ 46,339	$ 3,000	$ 49,339	$ -2,339
21294 - Cavity Nester	$ 6,000	$ 3,040	$ 133	$ 3,173	$ 2,827
21295 - Wetlands Projects	$ 17,200	$ 15,814	$-	$ 15,814	$ 1,386
21296 - Parsnip Forage Plan	$ 6,000	$ 3,389	$-	$ 3,389	$ 2,611
21299 - Furbearer Projects	$ 12,000	$ 1,703	$-	$ 1,703	$ 10,297
21300 - Peace Sheep & Elk	$ 21,500	$ 16,644	$ 3,349	$ 19,993	$ 1,507
21301 - West Williston Caribou	$ 21,800	$ 23,306	$ 4,192	$ 27,498	$ -5,698
21302 - Ungulate Diet Analysis	$ 3,000	$ 1,521	$ 283	$ 1,804	$ 1,196
21305 - Peace Habitat Mapping	$ 35,000	$ 7,754	$ 8,200	$ 15,954	$ 19,046
Hydro Project Management	$ 56,500	$ 57,382	$ 2,951	$ 60,333	$ -3,833
Public Consultation	$ 11,000	$ 11,000	$-	$ 11,000	$-
TOTALS	$ 350,000	$ 251,398	$ 37,133	$ 288,531	$ 61,469

The above figures were calculated on April 7, 1992 from B.C. Environment accounting system forecasts and expenditures, and from personal record keeping in the Williston Wildlife office. Invoices for goods and services that had been committed or incurred during the 91/92 fiscal year, but had not yet gone through the B.C. Environment accounting system, are listed under "Amount Forecasted". The "Total Expenditure" for the year is the sum of the "Amount Expended" and the "Amount Forecasted" columns. Estimates of $$ figures for "Hydro Project Management" and "Public Consultation" (B.C. Hydro accounts) were based on record keeping in the Williston Wildlife office, however, precise figures would need to be obtained from the B.C. Hydro accounting office. An underexpenditure of $61,469 was incurred this fiscal year.